[*J. Ethnopharmacol.*, **68**, 219-228 (1999)] [Lab. of Pharmacology]

Effects of Shimotsu-to (a Kampo medicine, Si-Wu-Tang) and its constituents on triphasic skin reaction in passively sensitized mice.

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We recently found that the third-phase inflammatory reaction with intense and persisting infiltration of eosinophils, named 'very late phase reaction' (vLPR), was induced by dinitrofluorobenzene (DNFB) challenge peaking at 8 days. We examined the effects of Shimotsu-to and its constituent crude drugs on triphasic skin reaction. Shimotsu-to inhibited ear swelling in LPR and vLPR after DNFB challenge. The inhibitory effect on both reactions was partly due to Cnidii Rhizoma, indicating the usefulness of the drugs for cutaneous inflammatory diseases.

[*Chem. Pharm. Bull.*, **47**, 1634-1637 (1999)] [Lab. of Pharmacognosy]

Biosynthesis of Oleoside-, 10-Hydroxyoleoside- and Ligustaloside-Type Glucosides from Secologanin.

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A biosynthetic pathway from secologanin to oleoside-, 10-hydroxyoleoside- and ligustaloside-type secoiridoid glucosides was examined by feeding experiments in which the respective C-8 stereoisomers of [8-^{3}H]-8,10-epoxysecologanin and [8-^{3}H]-8,10-epoxysecoxyloganin as well as [carbomethoxy-$^{2}H_{3}$]secologanin were administered separately to three pleaceous plants. The results showed that (8S)-8,10-epoxysecologanin was an intermediate between secologanin and secoiridoid glucosides of the three types.

[*Phytochemistry*, **50**, 417-422 (1999)] [Lab. of Pharmacognosy]

Transformation of Loganin and 7-Deoxyloganin into Secologanin by *Lonicera japonica* Cell Suspension Cultures.

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Cell suspension cultures of *Lonicera japonica* used in this study did not produce any iridoid and secoiridoid glucosides. However, the cells had the ability to convert loganin into secologanin. The cells also converted 7-deoxyloganin into both loganin and secologanin, but not geraniol into either iridoid glucoside or secologanin. In *L. japonica* cultured cells, the lack of the enzymes converting geraniol into iridoids might result in the non-production of secologanin.

[*Phytochemistry*, **50**, 695-701 (1999)] [Lab. of Pharmacognosy]

Four Isoflavones from Roots of *Sophora tetraptera*.

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Four new isoflavanones, tetrapterols F-I, were isolated from roots of *Sophora tetraptera* in addition to seven known flavonoids. These structures were determined by means of spectroscopic method.